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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,250	03/02/2004	Todd P. Lukanc	H1710	2802
45305	7590	09/23/2005	EXAMINER	
RENNER, OTTO, BOISSELLE & SKLAR, LLP (AMDS)			HO, TU TU V	
1621 EUCLID AVE - 19TH FLOOR			ART UNIT	
CLEVELAND, OH 44115-2191			PAPER NUMBER	

2818

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/791,250

Applicant(s)


LUKANC ET AL.

Examiner

Tu-Tu Ho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-21 is/are pending in the application.
- 4a) Of the above claim(s) 13-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/ Restriction

1. Applicant's election with traverse of **Invention I, claims 2-12**, in the reply filed on 08/02/2005, is acknowledged. The traversal is on the ground(s) that (1) The claims have been substantially examined, (2) No extra burden in searching and examining features of all the claims, and (3) All pending claims 2-21 have already been allowed or indicated as being allowable. This is not found persuasive because (1) & (3) The previous examination has been found inconclusive and incomplete, necessitating a new ground of rejection, and as detailed below, the indicated allowability of claims 2-12 and 13-21 has been withdrawn, and because (2) searching and examining features of all the claims will pose serious burden.

Most importantly, applicant did not distinctly and specifically point out the supposed errors in the restriction requirement mailed 07/27/2005.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 13-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Allowable Subject Matter

The indicated allowability of claims 2-12 and 13-21 is withdrawn in view of new interpretation of prior art of record. Rejections based on the new interpretation follow.

Claim Rejections § 102 & § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2 and 4-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Calafut U.S. Patent 6,229,163 (cited in a previous office action, and hereinafter referred to as the '163 reference).

Referring to **claim 2**, the '163 reference discloses a microdevice for forming a part of an integrated circuit as claimed or substantially as claimed. Specifically, the reference discloses a microdevice for forming a part of an integrated circuit, comprising:

a first conductive region ("active region" 27, Figs. 6-10, column 6, lines 45-50) and a second conductive region (28) having a channel region (29) interposed therebetween; and

a channel region controlling component (“gate” 30) disposed over the channel region and separated therefrom by at least one dielectric layer (10), wherein the channel region controlling component has a non-linear structural characteristics (as evident from Fig. 9) derived from a non-linear characteristic of a photo resist feature (19, Figs. 5-6) used as an etch mask for the channel region controlling component.

However, the reference fails to explicitly disclose that the non-linear characteristic of the photo resist feature (19) provides mechanical stability to the photoresist feature. Nevertheless, the non-linear characteristic of the photoresist feature (19) provides, at least to some degree, mechanical stability to the photoresist feature, or it appears that the non-linear characteristic of the photo resist feature (19) provides, at least to some degree, mechanical stability to the photoresist feature.

Referring to **claim 4**, the reference further discloses that the non-linear characteristic of the photo resist feature includes a vertex.

Referring to **claim 5**, the reference further discloses that the non-linear characteristic of the photo resist feature includes a tab (such as 25, Fig. 6) extending laterally beyond a width (generally indicated by the dotted line) of the photo resist feature.

Referring to **claim 6**, the reference further discloses that the channel region controlling component is made by deconstructive patterning of one of the photo resist feature or a structure patterned using the photo resist feature (Figs. 5-7).

Referring to **claim 7**, the reference further discloses that the microdevice is a transistor (Figs 5-10), the channel region controlling component (gate 30, column 6, lines 45-50) is a gate

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electrode, the first conductive region is a source and the second conductive region is a drain (“active regions”).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 3 and 8-12** are rejected under 35 U.S.C. §103(a) as being unpatentable over Calafut U.S. Patent 6,229,163 (cited in a previous office action, and hereinafter referred to as the ‘163 reference).

Referring to **claim 3**, the reference discloses a microdevice for forming a part of an integrated circuit as claimed or substantially as claimed and as detailed above for claim 2 including a fractal-based photo resist feature having a non-linear characteristic, but fails to teach that the non-linear characteristic of the photo resist feature includes an arc. However, as is known in the fractal art, the pertinent fractal art does not impose a restriction as to size and shape. Therefore, since the photo resist feature having a non-linear characteristic of the reference is a fractal-based photo resist feature, the fractal-based photo resist feature should be easily modified by a person of ordinary skill in the art, therefore would have been obvious at the time the invention was made, to include an arc.

Referring to **claims 8-10**, the '163 reference's gate 30, as detailed above for claim 7, formed by a fractal-based photo resist feature having a non-linear characteristic including an arc as modified above should comprise all limitations as claimed.

Referring to **claims 11-12**, as the reference does not exclude utilization of the gate/source/drain microdevice as a flash memory device, utilization of the gate/source/drain microdevice as a flash memory device would have been obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu-Tu Ho whose telephone number is (571) 272-1778. The examiner can normally be reached on 6:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID NELMS can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu-Tu Ho
September 19, 2005